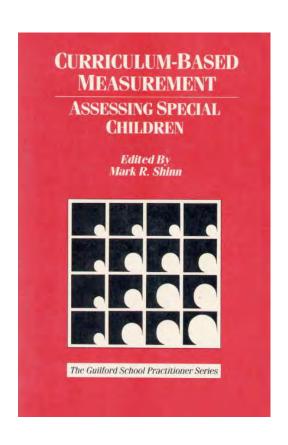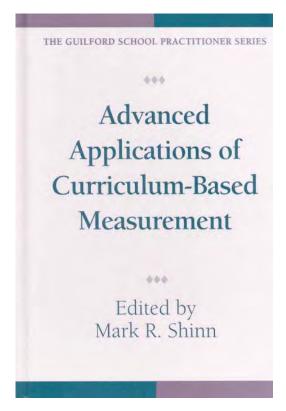# Progress Monitoring in RTI/MTSS: Critical Tools-Emerging School Practice

Mark R. Shinn, Ph.D.
Professor and School Psychology Program
National Louis University, Skokie, IL
markshinn@me.com
http://markshinn.org

Virginia Department of Education, February 2, 2012
Roanoke, VA

My Own Particular Area of Expertise

CURRICULUM-BASED MEASUREMENT

ASSESSING SPECIAL CHILDREN

Edited By
Mark R. Shinn

The Guilford School Practitioner Series

THE GUILFORD SCHOOL PRACTITIONER SERIES

♦♦♦

Advanced Applications of Curriculum-Based Measurement

♦♦♦

Edited by
Mark R. Shinn
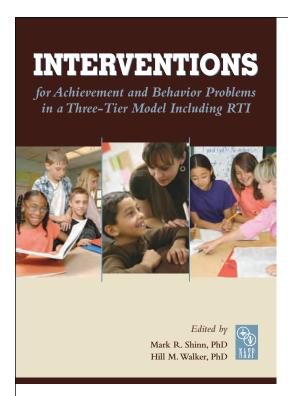
Editor and Contributor to 2 Major Texts on CBM

1 of 6 members of Technical Review Panel, National Center for Student Progress Monitoring, USDE/OSEP 2003-2007

Author of More than 75 Refereed Journal Articles and Book Chapters on the Topic of CBM, Progress Monitoring, and Screening

Background Reading
Chapter Written for New NASP Interventions Book

INTERVENTIONS
for Achievement and Behavior Problems in a Three-Tier Model Including RTI

Edited by
Mark R. Shinn, PhD
Hill M. Walker, PhD

Shinn, M. R. (2010). Building a scientifically based data system for progress monitoring and universal screening across three tiers including RTI using Curriculum-Based Measurement. In M. R. Shinn & H. M. Walker (Eds.), *Interventions for achievement and behavior problems in a three-tier model, including RTI*. Bethesda, MD: National Association of School Psychologists.
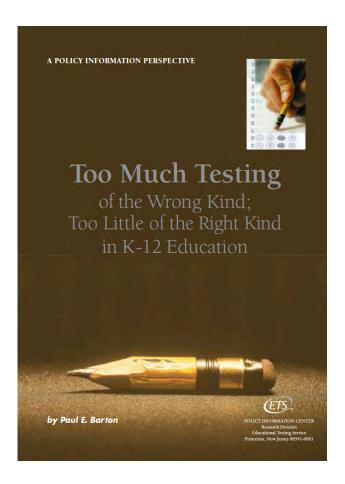
Disclosure

Mark R. Shinn, Ph.D. Serves as a Paid Consultant for **Pearson Assessment** for their **AIMSweb** product that provides CBM assessment materials and organizes and report the information from 3 tiers, including RTI

 Mark R. Shinn, Ph.D. Serves as a Consultant for **Cambium/Voyager/Sopris** for their **Vmath** product, a remedial mathematics intervention

Mark R. Shinn, Ph.D. Serves as a Consultant for McGraw-Hill Publishing for their **Jamestown Reading Navigator (JRN)** product and receives royalties

An Excellent Read

Barton, P. E. (1999). *Too much testing of the wrong kind; Too little of the right kind in K-12 education*. Princeton, NJ: Educational Testing Service, Research Division.

Accessing Some Reading Materials

markshinn.org

1. Click on the Downloads for Professionals Icon

2. Click on the Presentations and Handouts Folder

3. Click on the Virginia Department of Education RtI Progress Monitoring Folder
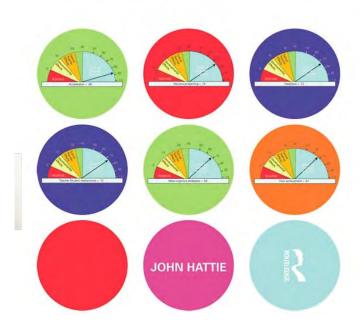
In RtI, Which Comes First?

RtI

R is About Our Capacity to Monitor PROGRESS

One Particular Kind of Assessment (Formative) is Among the MOST Powerful "Interventions" We Have

...effective across student age, treatment duration, frequency of measurement, and special needs status
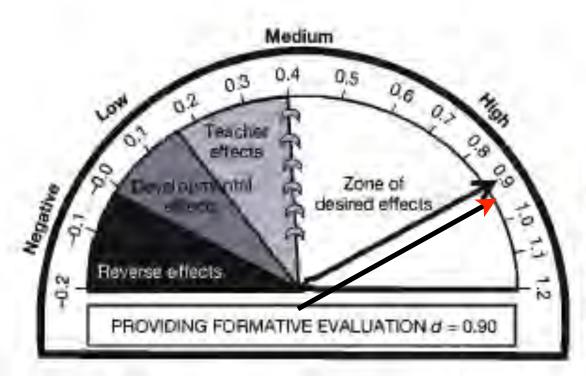
Major message is for teachers to pay attention to the formative effects of their teaching as it is this attribute of <u>seeking</u> (my emphasis) formative evaluation...that makes for excellence in teaching (p. 181)

VISIBLE LEARNING
A SYNTHESIS OF OVER
800 META-ANALYSES
RELATING TO ACHIEVEMENT

JOHN HATTIE

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York, NY: Routledge.

Meta-Analysis of Progress Monitoring Type Illustrated by CBM
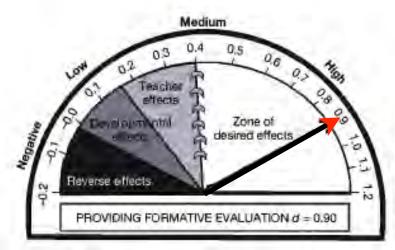
KEY	
Standard error	0.079 (Medium)
Rank	3rd
Number of meta-analyses	2
Number of studies	30
Number of effects	78
Number of people (1)	3,835

And the Number 1 Most Powerful TEACHING Variable

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* New York, NY: Routledge.

Contrast PM with A More Popular "Intervention" Individualized Instruction

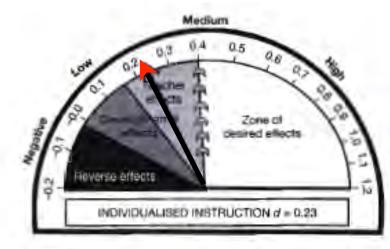KEY (top gauge)

KEY	
Standard error	0.079 (Medium)
Rank	3rd
Number of meta-analyses	2
Number of studies	30
Number of effects	78
Number of people (1)	3,835

PROVIDING FORMATIVE EVALUATION *d* = 0.90

KEY (bottom gauge)
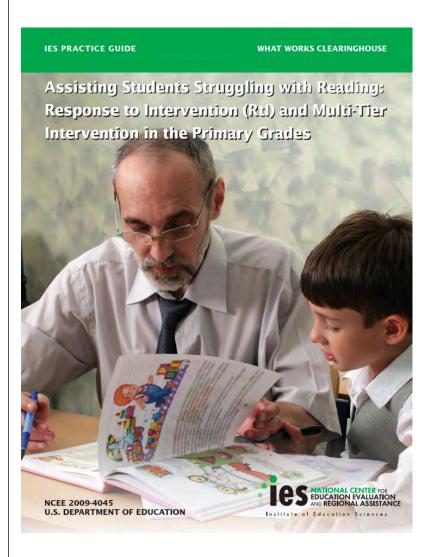
KEY	
Standard error	0.056 (Medium)
Rank	100th
Number of meta-analyses	9
Number of studies	600
Number of effects	1,146
Number of people (2)	9,380

INDIVIDUALISED INSTRUCTION *d* = 0.23

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* New York, NY: Routledge.

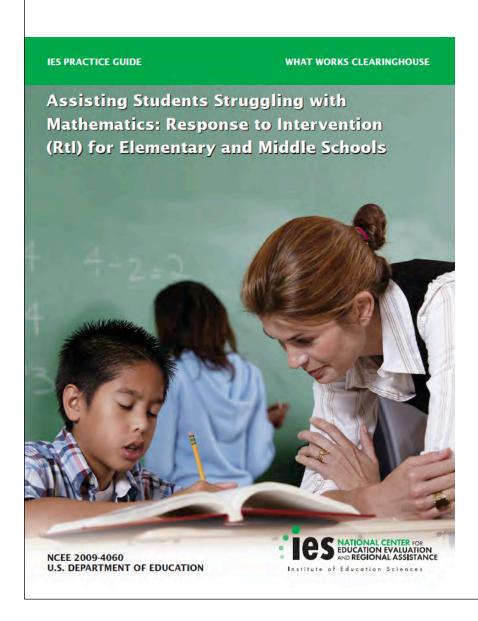# You See Screening and Frequent PM as Best Practices EVERYWHERE!

1. Increase the quality, consistency, and reach of instruction in every K-3 classroom

2. **Universal Screening** and **Timely** and **Valid Assessments** of **Reading Growth** for **Progress Monitoring**

3. Provide more intensive interventions to "catch up" the struggling readers

Reading Screening is Best Practice

IES PRACTICE GUIDE   WHAT WORKS CLEARINGHOUSE

Assisting Students Struggling with Reading:
Response to Intervention (RtI) and Multi-Tier
Intervention in the Primary Grades

NCEE 2009-4045
U.S. DEPARTMENT OF EDUCATION

ies NATIONAL CENTER FOR
EDUCATION EVALUATION
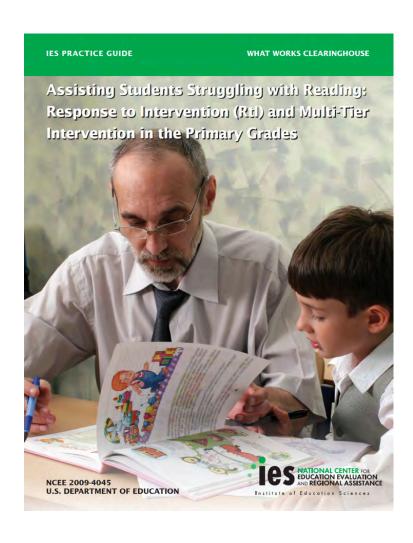AND REGIONAL ASSISTANCE
Institute of Education Sciences

Screen all students for potential
reading problems at the beginning of
the year
again in the middle of the year.

Mathematics Screening is Best Practice

1. Screen all students to identify those at risk for potential mathematics difficulties and provide interventions to students identified as at risk.

Reading Progress Monitoring is Best Practice

IES PRACTICE GUIDE   **WHAT WORKS CLEARINGHOUSE**

**Assisting Students Struggling with Reading:
Response to Intervention (RtI) and Multi-Tier
Intervention in the Primary Grades**

NCEE 2009-4045
U.S. DEPARTMENT OF EDUCATION

ies NATIONAL CENTER FOR
EDUCATION EVALUATION
AND REGIONAL ASSISTANCE
Institute of Education Sciences
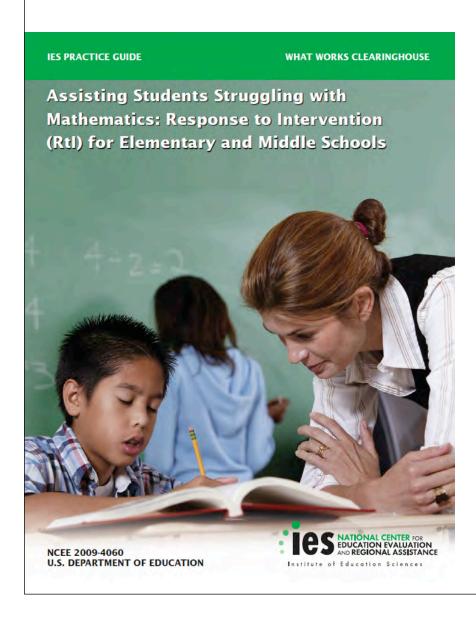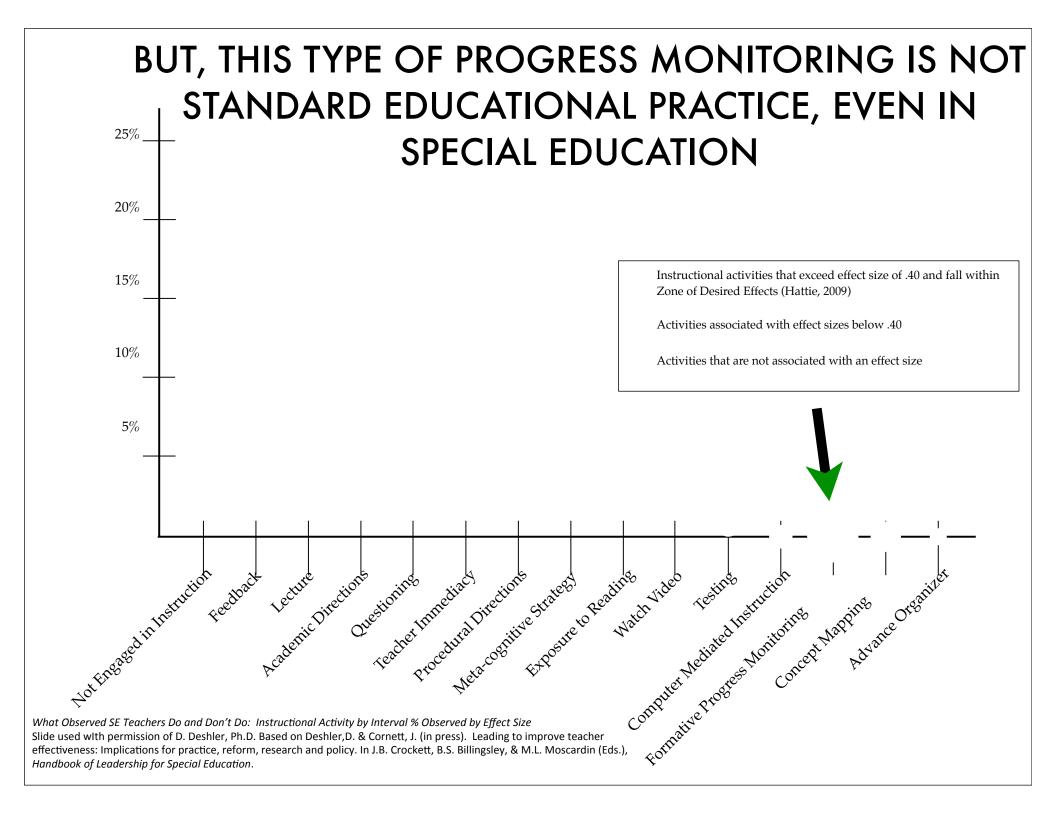
Regularly monitor the progress of students at risk for developing reading disabilities.

Monitor the progress of tier 2 students at least once a month.

Mathematics Progress Monitoring is Best Practice

1. Monitor the progress of students receiving supplemental instruction and other students who are at risk.

BUT, THIS TYPE OF PROGRESS MONITORING IS NOT STANDARD EDUCATIONAL PRACTICE, EVEN IN SPECIAL EDUCATION

Instructional activities that exceed effect size of .40 and fall within Zone of Desired Effects (Hattie, 2009)

Activities associated with effect sizes below .40

Activities that are not associated with an effect size

25%

20%

15%

10%

5%

Not Engaged in Instruction
Feedback
Lecture
Academic Directions
Questioning
Teacher Immediacy
Procedural Directions
Meta-cognitive Strategy
Exposure to Reading
Watch Video
Testing
Computer Mediated Instruction
Formative Progress Monitoring
Concept Mapping
Advance Organizer

What Observed SE Teachers Do and Don't Do: Instructional Activity by Interval % Observed by Effect Size
Slide used wIth permission of D. Deshler, Ph.D. Based on Deshler,D. & Cornett, J. (in press). Leading to improve teacher effectiveness: Implications for practice, reform, research and policy. In J.B. Crockett, B.S. Billingsley, & M.L. Moscardin (Eds.), *Handbook of Leadership for Special Education.*

Big Ideas

- One of the Features of a Multi-Tier, Coordinated Early Intervening Services Model (aka *RTI*) is Data-Based Decision Making, Particularly Reading Screening (Universal) and Progress Monitoring

- Schools Are Far More Interested in Screening Than Progress Monitoring; Progress Monitoring Practices are Haphazard and Jerry-Rigged Rather Than Planned, Proactive, Scientific, and Coordinated

- One Particular Type of Progress Monitoring, Frequent Formative Evaluation Using General Outcome Measurement (GOM), is Among the Most Powerful INTERVENTIONS We Have, Especially for Students with Achievement Discrepancies and With Disabilities

- There Are 5 Types or Families of Progress Monitoring Practices

- We Will Get Farther, Faster, by Proactively Planning Progress Monitoring Practices Across Types, Tiers, and Grade Levels

- It is Better to Do a Few Important Things Really Well, Than a LOT of Less Important Things Poorly so Let's Start with Progress Monitoring of Basic Skills and Prioritize Reading

- For These Reasons and More, We Must Consider Curriculum-Based Measurement as Vital for Our Tool Box

Goals

1. Provide Some Judicious Review, Linking Growth Curve Modeling with More Frequent Progress Monitoring Practices

2. Provide Some Consistent Vocabulary and Concepts for Frequent Progress Monitoring, Including What Makes for Good Progress Monitoring Practices

3. Provide Examples of Each of the 5 Types of Frequent Progress Monitoring Using Scientifically Based Tests Like Curriculum-Based Measurement (CBM)

4. Facilitate Proactive Planning of Coordinated Progress Monitoring Practices Across Types, Tiers, and Grade Level

5 Types of Frequent Progress Monitoring

Special Education Monitoring of IEP Objectives

Special Education Eligibility as Part of RtI

Tier 3 Progress Monitoring for Students with Severe Achievement Discrepancies

Tier 2 Progress Monitoring for Students At Risk

Tier 1 Progress Monitoring for All Students

Practice Exercise 1: What Are We Doing Now?

WITHIN GRADES ACROSS TIERS

Take Out Inventory Sheet 1:

Taking Inventory of Progress Monitoring Practices Across the 5 "Families" Using Grade 3 Reading

Think About Your School, Progress Monitoring, and These Questions

Talk and Report Out

Tests, Measures or Practices

What Tests, Measures or Practices are Used?

- MAP
- CBM (e.g., AIMSweb, DIBELS)
- SOL
- DRA
- Teacher Judgments
- Publishers End of Unit Tests
- Running Records

How Often Are They Used for PM?

How Often Does Progress Monitoring Take Place

- Once Per Year
- Twice Per Year
- Three Times Per Year
- Four Times Per Year
- Monthly
- Weekly
- Daily
- Once in a While
- Irregularly

Who Does the PM?

The Person (or Thing) Who Does the Testing or Is Responsible

- Special Education Teacher

- RTI Team Member

- General Education Teacher

- Paraprofessional

- Specialist (e.g., School Psychologist)

- School Team

- Computer

Goal Setting Practices

What is the Intent of Progress Monitoring? How Are Goals Set or Written

— To Make AYP

— To Make the Same Rate of Progress as Other Students?

— To Reduce the Gap?

— I Don't Know?

Time and Cost?

How Much Time Does It Take Per Student and How Much Does It Cost to Do Each Year

- 2 min, 3 times per year?

- 45 min, once per month?

- Free?

- $20 per student?

How Do We Know It is Evidence Based?

It's Not Just Intervention(s) That Should Be Evidence-Based!

Good Progress Monitoring Tests Meet Technical Standards for Reliability, Validity, Sensitivity

- Peer-reviewed journals
- Independent Review by Appropriately Credentialed Experts
- Publishers' Materials
- Personal Opinion

Points of Vulnerability

What Can Go Wrong or Adversely Affect Judgments

- Lack of training

- Lack of time

- Students may not be motivated

- Computers may not work reliably

Results?

- COMPLETE?

- COORDINATED AND CONSISTENT?

- COMPLICATED?

- CONFIDENCE?

- FEASIBLE?

Practice Exercise 2: What Are We Doing Now?

ACROSS GRADES WITHIN A TIER

Take Out Inventory Sheet 2:

Taking Inventory of Progress Monitoring Practices Across the 3 Grades When Provided Tier 3 and/or Special Education for Reading Concerns

Think About Your School, Progress Monitoring, and These Questions

Talk and Report Out

Results?

— COMPLETE?

— COORDINATED AND CONSISTENT?

— COMPLICATED?

— CONFIDENCE?

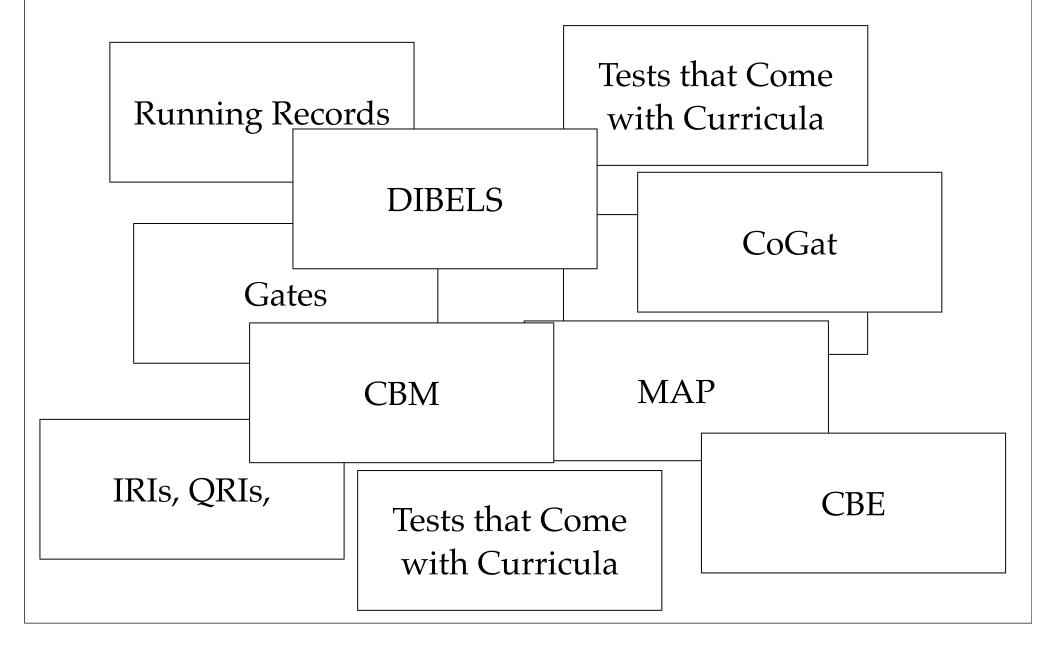— FEASIBLE?

Develop Consistent Understanding and Vocabulary

Very Few Have Had Extensive Training in Assessment

What Training We Have Received in Typically NOT in Progress Monitoring Practices

KNOW THE 4 TYPES OF TESTS

Type of Test	Assessment Question
Screening (Individual or Universal)	Is the student sufficiently different that further assessment or intervention is required?
Instructional Planning or "Diagnosis"	What to teach and how to teach it?
Progress Monitoring	Is the student benefiting from the intervention
Program Evaluation and Accountability	Is what we are doing making a difference for our STUDENTS?

The World of Assessment

Running Records

Tests that Come with Curricula

DIBELS

CoGat

Gates

CBM

MAP

IRIs, QRIs,

Tests that Come with Curricula

CBE

Foundational Concepts:
Schools See Screening as More Important than PM

- Screening is About Finding the Students with Educational (or Behavioral Needs): Good Intentions

- It's Consistent with Our Belief System that (Most) Problems are "Within the Student": Assigning the Blame

- Progress Monitoring is More About US: Is What WE are Doing Working?

- PM Results May Make Us Question What We Do and/or Require Us to Do Something DIFFERENT!

Know the Purpose of Specific Tests and Reduce Assessment to the Essentials

Take a Basic Skills Focus
Screen Everyone (Universal) as Long as You Need To
Screen Individuals When It is More Time and Cost Efficient
Progress Monitor (PM) Everyone as Long as You Need To
PM More Frequently at Tiers 2 and 3, and IEPs
Be Conservative in Accountability Testing
Don't Try to Diagnose (Assess for Instructional Planning) Everyone and A Lot!
Build a High Quality Grading and Reporting System for Content Area Classes

Foundational Concepts: PM is Hampered By Lack of Familiarity with Key Vocabulary and Concepts

Formative Assessment

— Assessing DURING Instruction to Judge Whether Learning Is Occurring or Whether Changes in Intervention is Required

Summative Assessment

— Assessing AFTER Instruction to Judge Whether What is Taught is LEARNED

Foundational Concepts: PM is Hampered By Lack of Familiarity with Key Vocabulary and Concepts
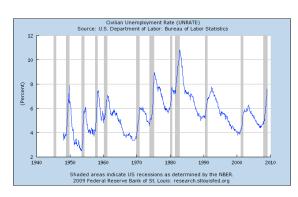
STANDARDIZED

- Whether a test or assessment process is done in a consistent and standard way across students and time.

- Administered, scored and interpreted in a STANDARD WAY

- Standardized Tests are Necessary to:

  - Compare students to identify those with different educational needs

  - Compare an individual student's progress over time

Foundational Concepts: PM is Hampered By Lack of Familiarity with Key Vocabulary and Concepts

General Outcome Measurement

- Assessing Progress over Time Using a Simple *Indicator* That is The Same Measure Each Time

- Comparable to Other Fields, Less Comfortable to Educators
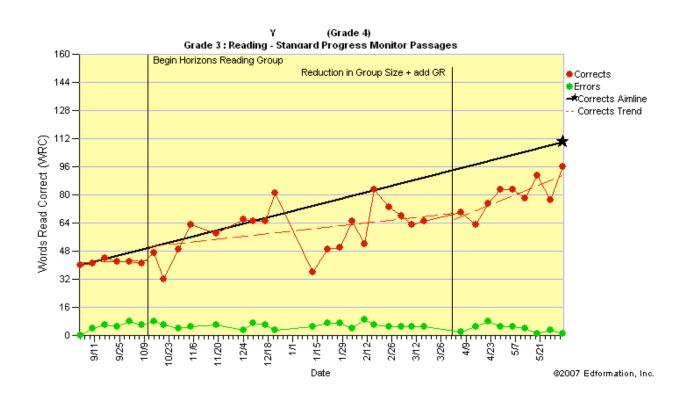
- Requires the *Indicator is Valid*

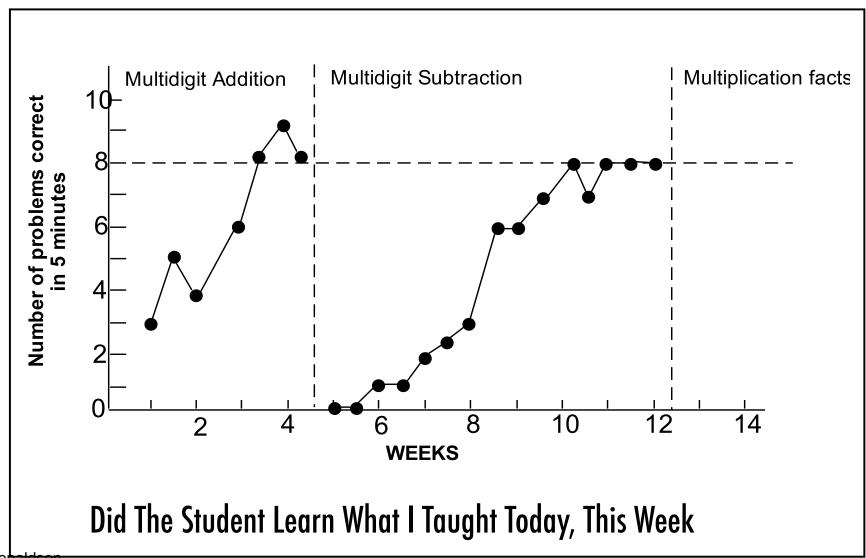
Weight Loss

Economic Activity

Reading GOM or LTM

Is the Student Becoming a Better Reader

Foundational Concepts: PM is Hampered By Lack of Familiarity with Key Vocabulary and Concepts

Mastery Monitoring (MM) or Short-Term Measurement (STM)

- Assessing Progress over Time Using Multiple (and Different) Tests at Different Times
- Comfortable to Teachers
- Requires the Instructional Sequence to be Valid Among Other Criteria
- Can Be Logistically Complex Because Tests Are Constantly Changing
- But High INSTRUCTIONAL VALIDITY

Mastery of Multi-Digit Addition and Subtraction

Did The Student Learn What I Taught Today, This Week

Sample Grade 4 Math Sequence

1 Multi-digit addition with regrouping

2 Multi-digit subtraction with regrouping

3 Multiplication facts, factors to 9

4 Multiply 2-digit numbers by a 1-digit number

5 Multiply 2-digit numbers by a 2-digit number

6 Division facts, divisors to 9

7 Divide 2-digit numbers by a 1-digit number

8 Divide 3-digit numbers by a 1-digit number

9 Add/subtract simple fractions, like denominators

10 Add/subtract whole number and mixed number

For Each Objective, a Different Test is Used: Multi-Digit Addition Mastery Test

Name: _____   Date _____

Adding

36521	53429	84525	67842	57321
+63758	+63421	+75632	+53937	+46391

56382	36422	34824	32415	45321
+94742	+57529	+69426	+85439	+86274
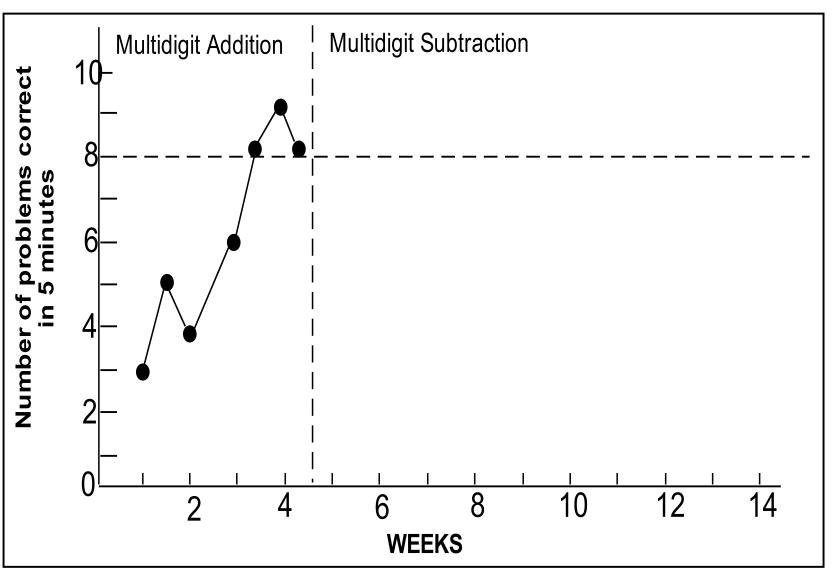
Performance on Multi-Digit Addition is Graphed
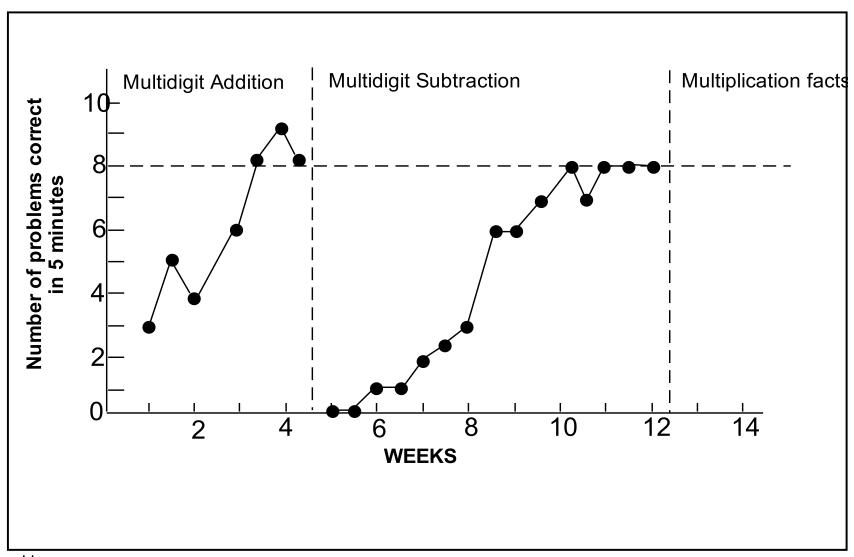
Student Moves On to Multi-Digit Subtraction

Name: _____   Date _____

Subtracting

```
  6521        5429        8455        6782        7321
-  375      -  634      -  756      -  937      -  391
------      ------      ------      ------      ------


  5682        6422        3484        2415        4321
-  942      -  529      -  426      -  854      -  874
------      ------      ------      ------      ------
```

Results on Objective 2 are Then Graphed
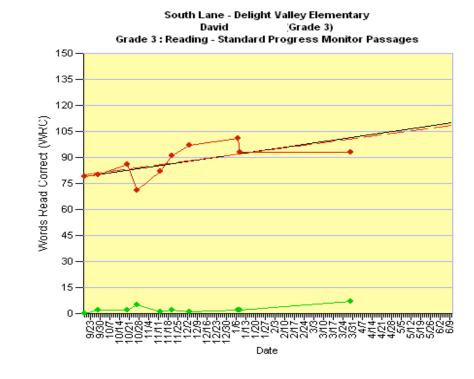
Design Frequent Progress Monitoring By Priorities...
Needs Differ by Grade by Skills Status

K-3	4-6	7-9	10-12
ALL STUDENTS 3-4 Times Per Year	ALL STUDENTS 3-4 Times Per Year	ALL OR SOME STUDENTS SCREEN	**SOME STUDENTS SCREEN**
AT RISK At Least 1x Per Month	AT RISK At Least 1x Per Month	AT RISK At Least 1x Per Month	AT RISK At Least 1x Per Month
SEVERELY DISCREPANT At Least 1x Per Week	SEVERELY DISCREPANT At Least 1x Per Week	SEVERELY DISCREPANT At Least 1x Per Week	SEVERELY DISCREPANT At Least 1x Per Week

Students Who Are Significantly Discrepant

K-3	4-6	7-9	10-12
SEVERELY DISCREPANT At Least 1x Per Week	SEVERELY DISCREPANT At Least 1x Per Week	SEVERELY DISCREPANT At Least 1x Per Week	SEVERELY DISCREPANT At Least 1x Per Week

Weekly PM Allows Interventions to Be Modified, If Necessary With 4-6 Weeks
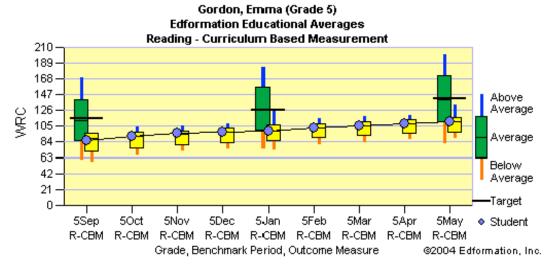
South Lane - Delight Valley Elementary
David   (Grade 3)
Grade 3 : Reading - Standard Progress Monitor Passages

Students Who Are Moderately Discrepant (More At Risk)

K-3	4-6	7-9	10-12
AT RISK At Least 1x Per Month	AT RISK At Least 1x Per Month	AT RISK At Least 1x Per Month	AT RISK At Least 1x Per Month

Weekly to Monthly PM Allows Interventions to Be Modified, If Necessary With 4-6 Weeks At Low Cost in Terms of Assessment Time

Gordon, Emma (Grade 5)
Edformation Educational Averages
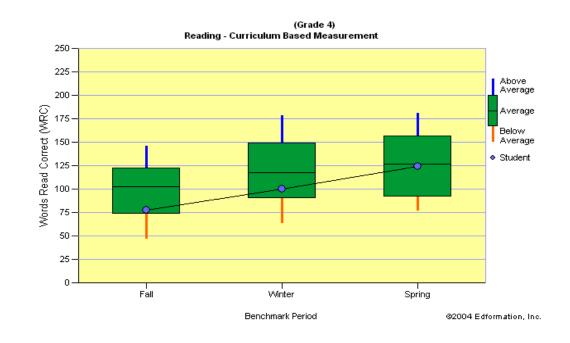Reading - Curriculum Based Measurement

©2004 Edformation, Inc.

This chart shows that Emma Gordon improved from 85 Words Read Correct (WRC) from grade 5 Passages at the September Benchmark to 90 Words Read Correct (WRC) at the October Benchmark and to 94 Words Read Correct (WRC) at the November Benchmark and to 96 Words Read Correct (WRC) at the December Benchmark and to 98 Words Read Correct (WRC) at the January Benchmark and to 101 Words Read Correct (WRC) at the February Benchmark and to 104 Words Read Correct (WRC) at the March Benchmark and to 107 Words Read Correct (WRC) at the April Benchmark and to 110 Words Read Correct (WRC) at the May Benchmark. The rate of improvement (ROI) from the September Benchmark is 0.8 WRC per week. Currently, Emma Gordon's score is **Average** compared to Edformation Educational Averages.

Tier 1 General Education Students

K-3	4-6	7-9	10-12
ALL STUDENTS 3-4 Times Per Year	ALL STUDENTS 3-4 Times Per Year	ALL OR SOME STUDENTS SCREEN + Better Grading System	Better Grading Systems Plus SCREEN SOME

Benchmark Assessment Allows for Interventions to be Modified 2 Times During the Year and Adds Universal Screening

(Grade 4)
Reading - Curriculum Based Measurement
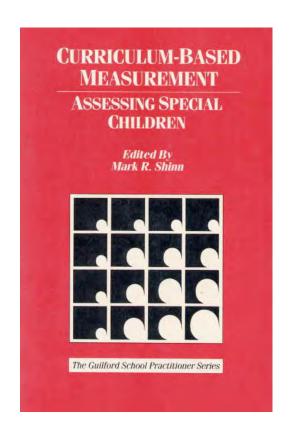
©2004 Edformation, Inc.
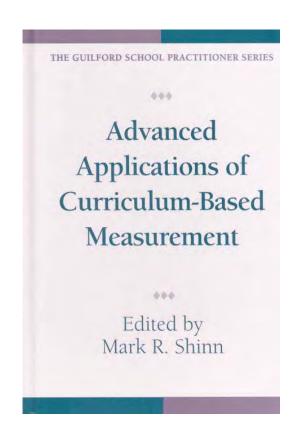
Foundation for Proactive Planning

Let's Start With Reading Because It is So Important

Let's Prioritize Frequent Progress Monitoring for Students with Most Severe Educational Needs Where We Don't Have Time to Waste
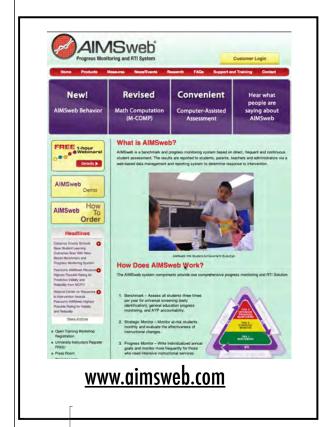
Let's Use Reading CBM to Do This

My Bias Is to Use Curriculum-Based Measurement for Reading Frequent PM

CBM is the GENERAL Label for a "Family" of Assessments

www.aimsweb.com

dibels.uoregon.edu

Easy CBM www.easycbm.com

http://www2.ctb.com/products_services/ypp

Why Does Mark Prefer CBM?
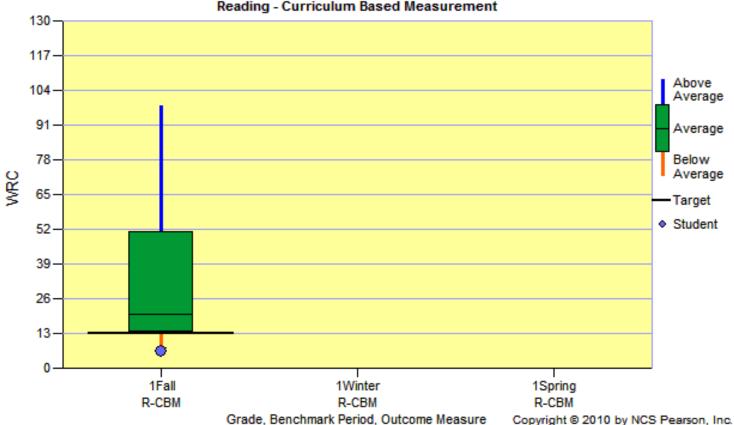
I Can "See"—and Hear—Progress

It's Easy to Do

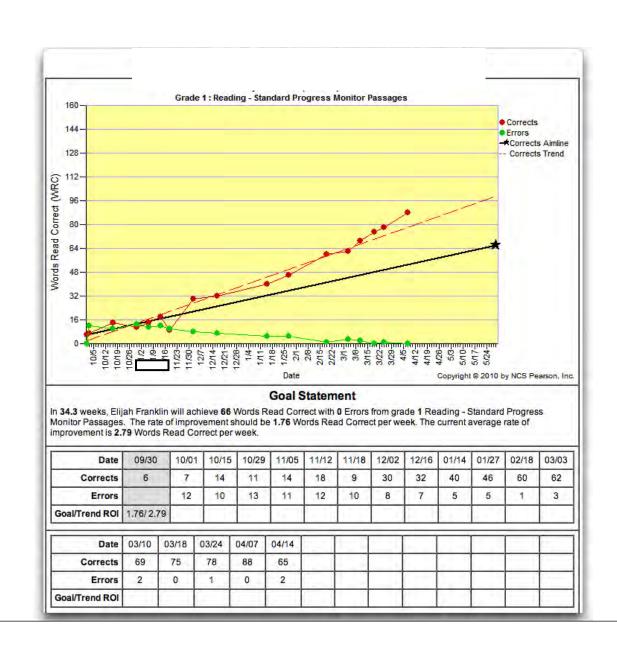It Doesn't Take a Lot of Time

It Doesn't Cost a Lot of $$

It's Scientifically Based
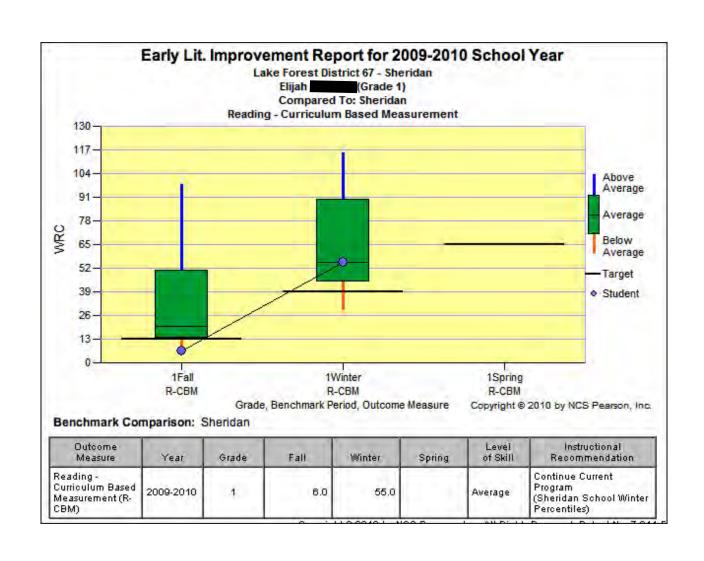
Screening Suggested Need for Tier 3 Intervention

Lake Forest District 67 - Sheridan
Elijah   (Grade 1)
Compared To: Sheridan
Reading - Curriculum Based Measurement

Progress Monitoring Results

Grade 1 : Reading - Standard Progress Monitor Passages

Goal Statement

In **34.3** weeks, Elijah Franklin will achieve **66** Words Read Correct with **0** Errors from grade **1** Reading - Standard Progress Monitor Passages. The rate of improvement should be **1.76** Words Read Correct per week. The current average rate of improvement is **2.79** Words Read Correct per week.

Date	09/30	10/01	10/15	10/29	11/05	11/12	11/18	12/02	12/16	01/14	01/27	02/18	03/03
Corrects	6	7	14	11	14	18	9	30	32	40	46	60	62
Errors		12	10	13	11	12	10	8	7	5	5	1	3
Goal/Trend ROI	1.76/ 2.79												

Date	03/10	03/18	03/24	04/07	04/14								
Corrects	69	75	78	88	65								
Errors	2	0	1	0	2								
Goal/Trend ROI													

Gap Significantly Reduced

Early Lit. Improvement Report for 2009-2010 School Year
Lake Forest District 67 - Sheridan
Elijah ████████ (Grade 1)
Compared To: Sheridan
Reading - Curriculum Based Measurement

Benchmark Comparison: Sheridan

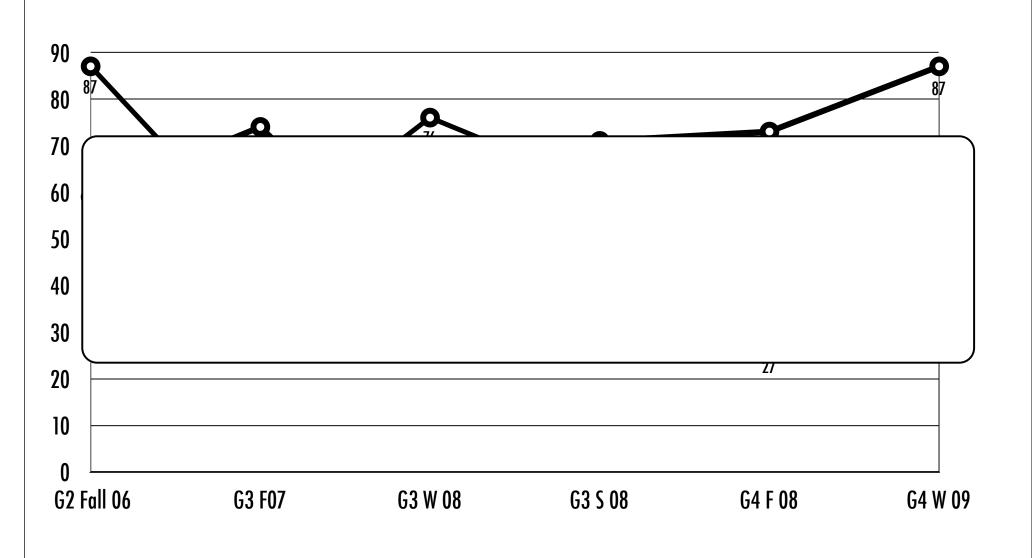| Outcome Measure	Year	Grade	Fall	Winter	Spring	Level of Skill	Instructional Recommendation
Reading - Curriculum Based Measurement (R-CBM)	2009-2010	1	6.0	55.0		Average	Continue Current Program (Sheridan School Winter Percentiles)

It's Not Easy to SEE on Other Tests

Reading

Season/ Year	Grade	Student Score Range	Dist. Avg RIT	Norm Group Avg.	Student Growth	Typical Growth	Student %ile Range
W10	5	219- **222** -225	216	210			77- **84** -91
S09	4	206- **209** -212	212	206	17	8	45- **57** -67
W09	4	201- **205** -209	209	204			39- **51** -61
F08	4	189- **192** -195	203	200			21- **27** -33
S08	3	200- **203** -206	204	199	12	9	52- **61** -73
W08	3	202- **205** -209	200	196			65- **76** -84
F07	3	188- **191** -194	195	192			40- **48** -56
F06	2	192- **195** -198	178	180			82- **87** -93

I Made It Easier to See

Use Important Indicators

FOUNDATIONAL CONCEPTS
Almost Anyone Can Do It
Scientific
Developmentally Identical
Culturally Independent

So What Are the Barriers to CBM

Exercise 3: What Are Your Concerns About Using a Tool Like This for Frequent Progress Monitoring?

Points of Confusion/Concern

Failure to Understand Progress Monitoring

Lack of Confidence in Short Tests

"Fluency"

Oral Reading Synthesis....

...we believe that the *flexibility and durability of CBM* in reading across *different measures, materials, settings, students, and situations is notable.*

This flexibility and durability provide the basis for considering the development of a *seamless and flexible system of progress monitoring* that could be used *across students of various ages* and performance levels.

Such a system might allow one to *follow the progress of a student from kindergarten to Grade 12,* using the same measures and materials or linking measures and materials.

Miura Wayman, M., Wallace, T., Ives Wiley, H., Ticha, R., & Espin, C. (2007). Literature synthesis on curriculum-based measurement in reading. *The Journal of Special Education, 41*(2), 85-120.
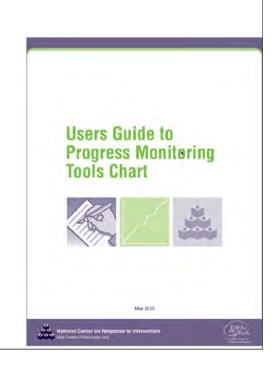
Research Institute on Progress Monitoring (RIPM) Synthesis (2004)

The latest comprehensive CBM literature review, reported in Jenkins and

Fuch presented the 2004 RIPM synthesis, tabulating 585 CBM research

reports, 307 of which were published in journals…with 141 empirical studies

addressing technical adequacy, instructional utility, and implementation

logistics.

Jenkins, J. R., & Fuchs, L. S. (in press). Curriculum-Based Measurement: The Paradigm, History, and
    Legacy. In C. A. Espin, K. McMaster, S. Rose & M. Wayman (Eds.), *A measure of success: How
    Curriculum-Based Measurement has influenced education and learning.* Minneapolis, MN: University
    of Minnesota Press.

National RTI Center Progress Monitoring Minimum Criteria

1. *Alternate forms* are of *equal and controlled difficulty* or if IRT based, evidence of item or ability invariance.

2. *Minimum acceptable growth* (slope of improvement or average weekly increase in score

3. *Benchmarks* for *minimum acceptable end-of-year performance* specified in manual or published materials?

4. Monitoring system produces *data that are sensitive to student improvement.*

5. *Reliability* of the *performance level* score (e.g., internal consistency, stability, test-retest reliability).

6. *Reliability for the slope* by grade level.

7. *Validity for the performance level* score (e.g., content, concurrent, predictive, and/or construct)

8. *Predictive validity* information for the slope of improvement.

Users Guide to Progress Monitoring Tools Chart

May 2010

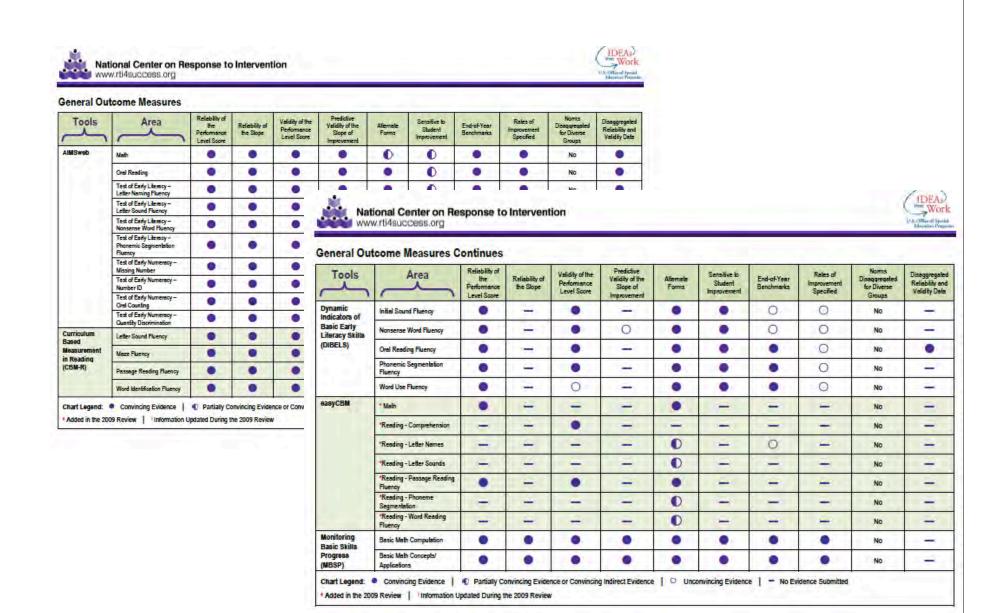# National RTI Center PM Results

General Outcome Measures

Tools	Area	Reliability of the Performance Level Score	Reliability of the Slope	Validity of the Performance Level Score	Predictive Validity of the Slope of Improvement	Alternate Forms	Sensitive to Student Improvement	End-of-Year Benchmarks	Rates of Improvement Specified	Norms Disaggregated for Diverse Groups	Disaggregated Reliability and Validity Data
AIMSweb	Math	●	●	●	●	◐	◐	●	●	No	●
	Oral Reading	●	●	●	●	●	◐	●	●	No	●
	Test of Early Literacy – Letter Naming Fluency	●	●	●	●	●	◐	●	●	No	●
	Test of Early Literacy – Letter Sound Fluency	●	●	●	●	●	◐	●	●	No	●
	Test of Early Literacy – Nonsense Word Fluency	●	●	●	●	●	◐	●	●	No	●
	Test of Early Literacy – Phonemic Segmentation Fluency	●	●	●	●	●	◐	●	●	No	●
	Test of Early Numeracy – Missing Number	●	●	●	●	●	—	●	●	No	●
	Test of Early Numeracy – Number ID	●	●	●	●	●	—	●	●	No	●
	Test of Early Numeracy – Oral Counting	●	●	●	●	●	—	●	●	No	●
	Test of Early Numeracy – Quantity Discrimination	●	●	●	●	●	—	●	●	No	●
Curriculum Based Measurement in Reading (CBM-R)	Letter Sound Fluency	●	●	●	●	●	●	●	●	No	—
	Maze Fluency	●	●	●	●	●	●	●	●	No	—
	Passage Reading Fluency	●	●	●	●	●	●	●	●	No	—
	Word Identification Fluency	●	●	●	●	●	●	●	●	No	—

Chart Legend: ● Convincing Evidence | ◐ Partially Convincing Evidence or Convincing Indirect Evidence | ○ Unconvincing Evidence | — No Evidence Submitted

* Added in the 2009 Review | ¹ Information Updated During the 2009 Review

National RTI Center PM Results

BUT...The Problem of "Fluency" and Comprehension

None of the CBM/AIMSweb Measures Assess "Fluency!"

The are SHORT TESTS, to Allow Collecting SNAPSHOTS of General Skill Efficiently and Accurately

In Reading, General Reading Skill is NECESSARY, But Not Sufficient for Understanding

Consequences of (Mis) Interpretation as Fluency

If Interpreted As Fluency	If Interpreted (Correctly) As General Reading Ability
Goal is to Read Fast	Goal is to Read WELL
Interventions Emphasize Speed	Interventions Emphasize Quality
Interventions are "Slices" or Bandaids	Interventions are Integrated or Bandages

The Intervention Effects of "Reading Faster"?

Implementing repeated reading and wide reading interventions without more formative intervention is not likely to be valuable (p. 9)

Wexler, J., Vaughn, S., Roberts, G., & Denton, C. A. (2010). The efficacy of repeated reading and wide reading practice for high school students with severe reading disabilities. *Learning Disabilities Research & Practice, 25,* 2-10.

Our results indicate that repeated reading does not qualify as an evidence-based or promising practice for students with or at risk for learning disabilities (p. 276)

Chard, D. J., Ketterlin-Geller, L. R., Baker, S. K., Doabler, C., & Apichatabutra, C. (2009). Repeated reading interventions for students with learning disabilities: Status of the evidence. *Exceptional Children, 75,* 263-281.

Lack of Confidence in the Measures and "Fluency"–Is An IRI "Fluency?"

Problem	Solution
Different Ways of Doing an IRI	*Standardize the Directions*
100 Word Passages Were Challenging for Low Performers, Too Short for Good Readers	*Fix the Length of the Test Time, Not the Length of the Test Materials*
Accuracy Scores Don't Correlate Nor Are Sensitive to Meaningful Improvement	*Find a Better Score That IS Correlated and Sensitive (WRC)*

"Comprehension" is Oversimplified

A-Rod hit the cover off of the ball, but ended the game with a 6-4-3 double play.

Factual:
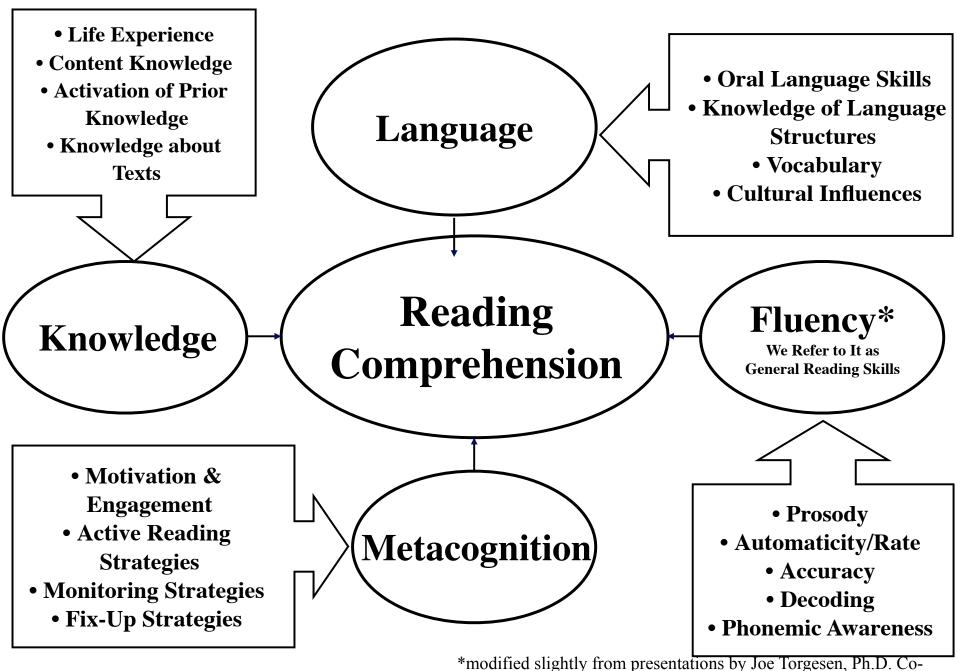
Who is A-Rod?
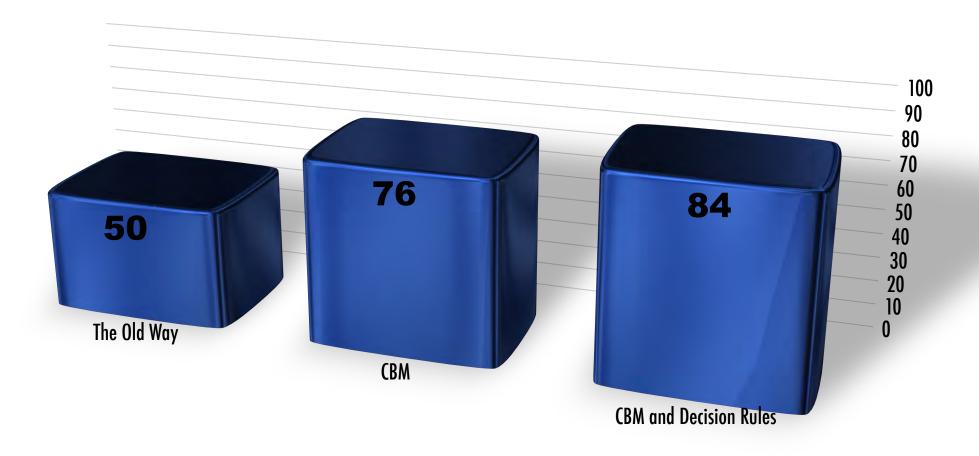
What does "6" mean?

Inferential:

Why would people from Beantown celebrate this?

Why would this event mean different things in June than October?

• Life Experience
• Content Knowledge
• Activation of Prior Knowledge
• Knowledge about Texts

Language

• Oral Language Skills
• Knowledge of Language Structures
• Vocabulary
• Cultural Influences

Knowledge

Reading Comprehension

Fluency*
We Refer to It as General Reading Skills

• Motivation & Engagement
• Active Reading Strategies
• Monitoring Strategies
• Fix-Up Strategies

Metacognition

• Prosody
• Automaticity/Rate
• Accuracy
• Decoding
• Phonemic Awareness

*modified slightly from presentations by Joe Torgesen, Ph.D. Co-Director, Florida Center for Reading Research; www.fcrr.org

But The Bottom Line is that It Powerfully Impacts Achievement, Especially for Kids At Risk or With Achievement Discrepancies

The Old Way	50
CBM	76
CBM and Decision Rules	84

Fuchs, L. S., & Fuchs, D. (1986). Effects of systematic formative evaluation: A meta-analysis. *Exceptional Children, 53*(3), 199-208.

Expedite RTI Implementation By Changing Special Education IEP and PM Practices!
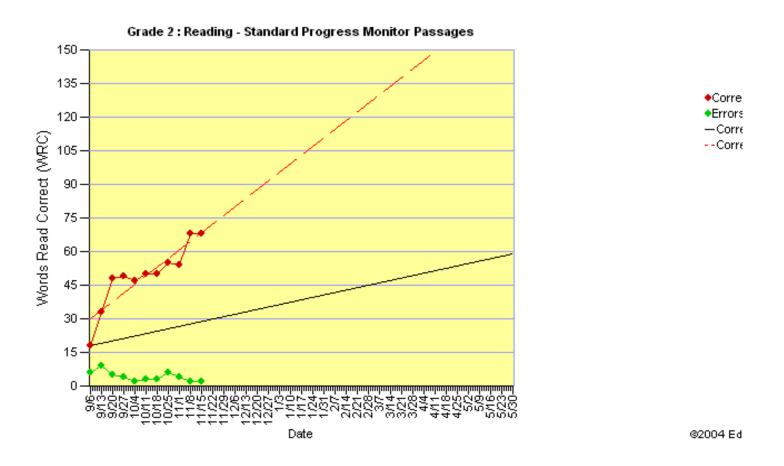
Special Education Leads!

Legitimizes PM Data

Most People Don't Like the Current Process–and for Good Reasons!

It Represents "Best Practice" for Students Who Receive SE

Consistent with the Practices that Would Determine SE Eligibility Through RTI

The *Gold Standard* for IEP Goals and Frequent Progress Monitoring

Grade 2 : Reading - Standard Progress Monitor Passages

In 1 year, Johnny will read 60 WRC with less than 3 errors in Grade 2 Reading Passages.

Resources

Shinn, M. R., & Shinn, M. M. (2000). Writing and evaluating IEP Goals and making appropriate revisions to ensure participation and progress in general curriculum. In C. F. Telzrow & M. Tankersley (Eds.), *IDEA Amendments of 1997: Practice guidelines for school-based teams.* (pp. 351-381). Bethesda, MD: National Association of School Psychologists.
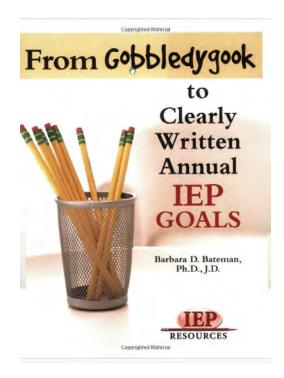
Shinn, M. R. (2003). *AIMSweb™ Training Workbook Progress Monitoring Strategies for Writing Individualized Goals in General Curriculum and More Frequent Formative Evaluation.* Eden Prairie, MN: Edformation, Inc.

Resources

Bateman, B. D., & Linden, M. A. (2006). *Better IEPs: How to develop legally correct and educationally useful programs* (4th ed.). Verona, WI: Attainment Co.

Bateman, B. D., & Linden, M. A. (2007). *From gobbledygook to clearly written annual IEP goals*. Verona, WI: Attainment Co.

Widespread Dissatisfaction with Current IEP and PM Practices

Unfortunately, the ***IEP process operates poorly in many places*** (e.g., McDonnell et al., l997). For years, IEPs have been based on a ***mastery measurement*** framework, which creates

lengthy,
unmanageable documents, and
onerous paper work.

These mastery measurement IEPs, with their ***long lists of short-term objectives***, also ***fail to provide a basis for quantifying outcomes***.

For these reasons and more, IEPs promote, at best, ***procedural compliance without accounting for individual student learning*** or describing special education effectiveness.

Legal Requirements for IEP Goal Progress Monitoring

Individualized Education Programs
§ 300.320 Definition of individualized education program.

(1) A statement of the child's **present levels of academic achievement** and functional **performance**,
(2)(i) A statement of **measurable annual goals**, including academic and functional goals designed to—
(
A) Meet the child's needs that result from the child's disability to enable the child to be involved in and make progress in the general education curriculum;...

(3) A description of—
(i) **How the child's progress** toward meeting the annual goals described in paragraph (2) of this section **will be measured**; and
(ii) **When periodic reports** on the progress the child is making toward meeting the annual goals (such as through the use of quarterly or other periodic reports, concurrent with the issuance of report cards) **will be provided**;

It's Not "Anything Goes"
Special Education Has Legal and Regulatory Requirements

(3) Use *technically sound instruments* that may assess the relative contribution of cognitive and behavioral factors, in addition to physical or developmental factors.

(c) <u>*Other evaluation procedures*</u>. Each public agency must ensure that–

(1) *Assessments and other evaluation materials* used to assess a child under this part–…

(iii) Are *used for the purposes* for which the assessments or measures are *valid and reliable;*

This Applies to ALL Special Education Assessment Activities

Nearly All Current IEP Goals Fail The "Measurable Criterion"

Goal Smorgasbord! Pseudo-Measurable Goals...

- Student will perform **spelling skills** at a **high 3rd grade level.**

- Student will **alphabetize words** by the second letter with **80% accuracy**.

- Student will read **words from the Dolch Word List** with **80% accuracy**.

- Student will master **basic multiplication facts** with **80% accuracy**.

- Student will increase **reading skills by progressing through Reading Street** with **90% accuracy** as determined by teacher-made fluency and comprehension probes by October 2011.

- To increase **reading ability** by **6 months to 1 year** as measured by the Woodcock Johnson.

- Student will make 1 **year's growth in reading** by October 2011as measured by the **Brigance**.

- Student will **be a better reader**.

Sample Observable and Measurable CBM IEP Goals

In 1 Year (Expiration of the IEP), John will

Read 115 Words Correctly (WRC) with 3 or fewer errors from a randomly selected Grade 4 Standard Reading Passage
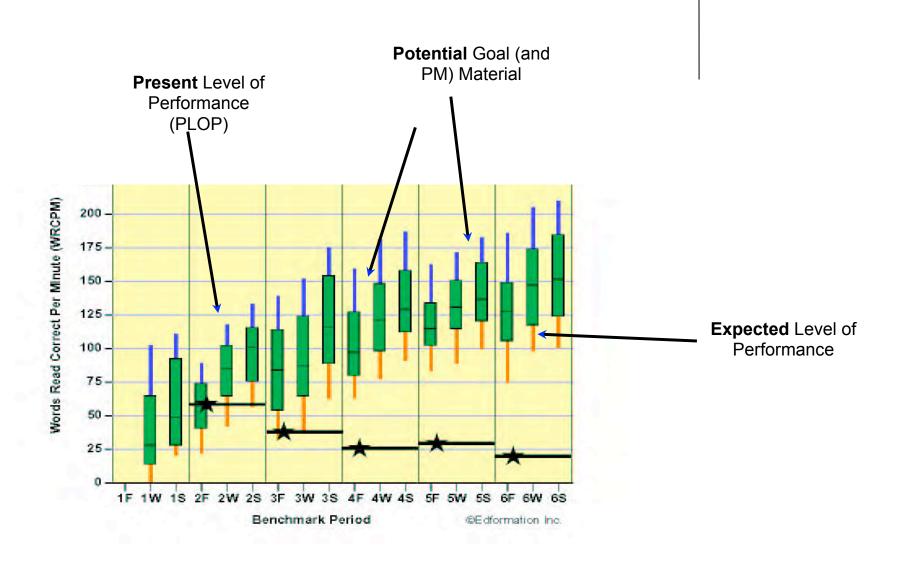
Earn a score of greater than 35 points on a randomly selected Grade 5 Mathematics Applications Probe

Write 45 Total Words (TWW) with 40 Correct Writing Sequences (CWS)given a randomly selected story starter.

Goal Setting Strategies
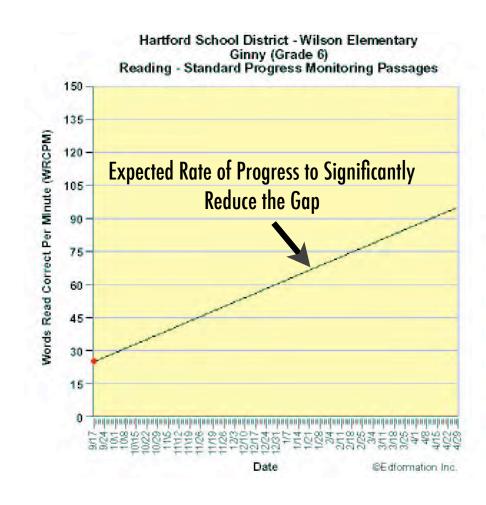
1. Determine the Present Level of Performance (PLOP) or Current Performance Information based on Survey-Level Assessment (SLA)

2. Know the Time Frame for the Goal

3. Determine the Level of Curriculum That Defines Success and Reduces the Gap

4. Define the Criterion for Success

How to Do a Survey Level Assessment to Write Individualized Goals
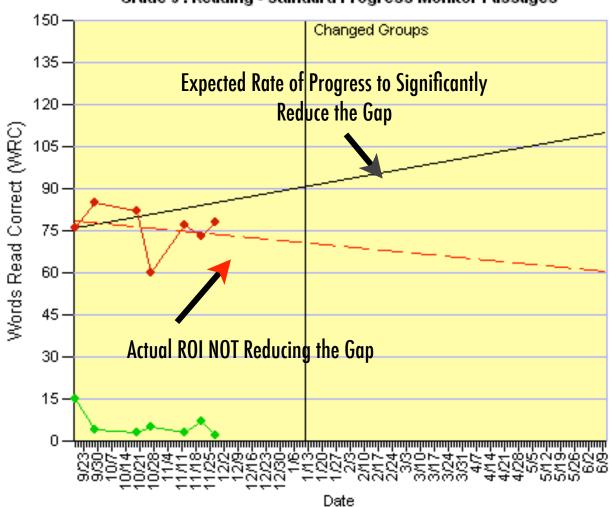
IEP Goal is Turned Into an Expected Rate of Progress on a Graph

In 34 weeks (1 year), Ginny will read 95 words read correctly with less than 3 errors from Grade 4 Reading Assessment Passages.

Hartford School District - Wilson Elementary
Ginny (Grade 6)
Reading - Standard Progress Monitoring Passages

Words Read Correct Per Minute (WRCPM)

Expected Rate of Progress to Significantly Reduce the Gap

Date

©Edformation Inc.

What Are We to Do With This?
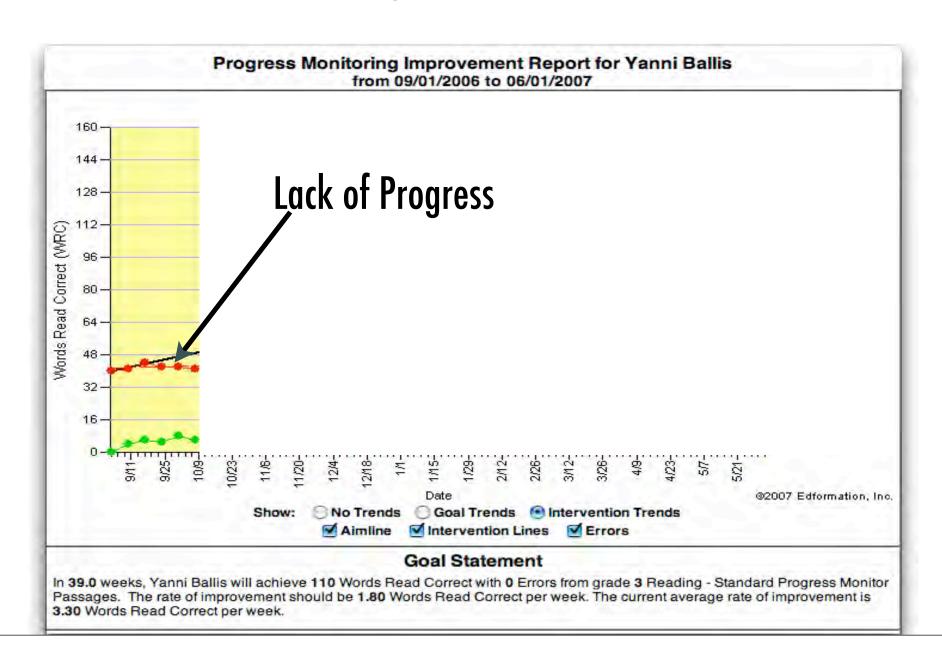
South Lane - Delight Valley Elementary
Jalese   (Grade 3)
Grade 3 : Reading - Standard Progress Monitor Passages

Expected Rate of Progress to Significantly Reduce the Gap

Actual ROI NOT Reducing the Gap

Catch Up to IDEA-97!

(b) *Review and revision of IEPs*—(1) *General.* Each public agency must ensure that,

  subject to paragraphs (b)(2)and (b)(3) of this section, the IEP Team—

(i) Reviews the child's IEP periodically, but not less than annually,

to determine whether the annual goals for the child are being achieved; and

(ii) Revises the IEP, as appropriate, to address—

(A) Any lack of expected progress toward the annual goals described in

§ 300.320(a)(2), and in the general education curriculum, if appropriate;

Revising the IEP

Progress Monitoring Improvement Report for Yanni Ballis
from 09/01/2006 to 06/01/2007

Lack of Progress

Words Read Correct (WRC)

160
144
128
112
96
80
64
48
32
16
0

9/11 9/25 10/9 10/23 11/6 11/20 12/4 12/18 1/1 1/15 1/29 2/12 2/26 3/12 3/26 4/9 4/23 5/7 5/21

Date

@2007 Edformation, Inc.

Show: ◯ No Trends ◯ Goal Trends ◉ Intervention Trends
☑ Aimline ☑ Intervention Lines ☑ Errors

Goal Statement

In **39.0** weeks, Yanni Ballis will achieve **110** Words Read Correct with **0** Errors from grade **3** Reading - Standard Progress Monitor Passages. The rate of improvement should be **1.80** Words Read Correct per week. The current average rate of improvement is **3.30** Words Read Correct per week.

Ensuring Quality PM is Part of the

RTI Dual Discrepancy

When Special Education is Considered

Average Achievement of Peers

Discrepancy 1: **Severe Educational Need**
(Current Performance Level or
Performance Discrepancy)

Discrepancy 2:
Educational Benefit (Adequate
Progress or Rate of
Improvement-ROI)

Target student

Adapted from Fuchs, 2003
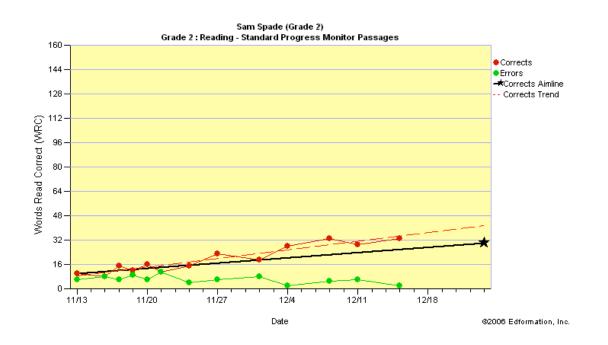
The Discrepancy is Necessary, But USUALLY Not Sufficient

Average Achievement of Peers

Discrepancy 1: **Severe Educational Need**
(Current Performance Level or Performance Discrepancy)

Discrepancy 2:
Educational Benefit
Gap is **INCREASING!**

Target student

Adapted from Fuchs, 2003

The SAME Progress Monitoring Practices Can Be Used to Assess Student's RTI as Part of SLD Entitlement

Sam Spade (Grade 2)
Grade 2 : Reading - Standard Progress Monitor Passages

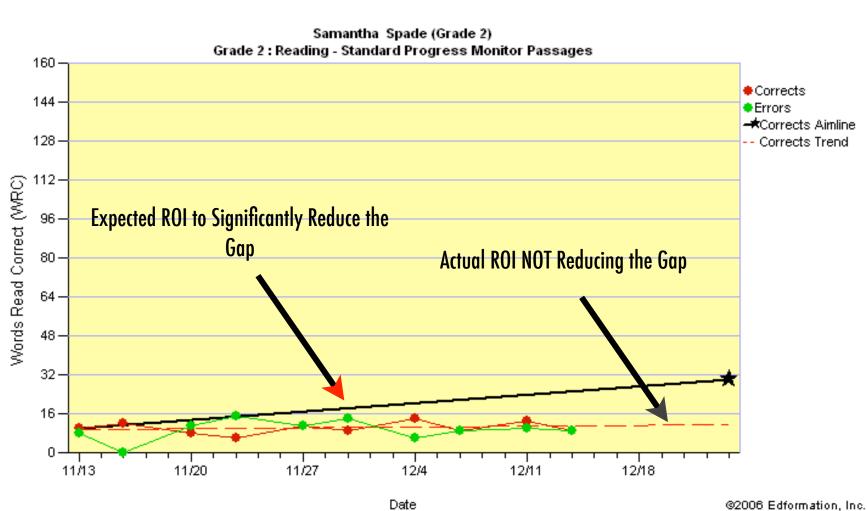## The **SAME** Progress Monitoring Practices Used **AFTER** Entitlement are Used, in part, to **DETERMINE** Entitlement
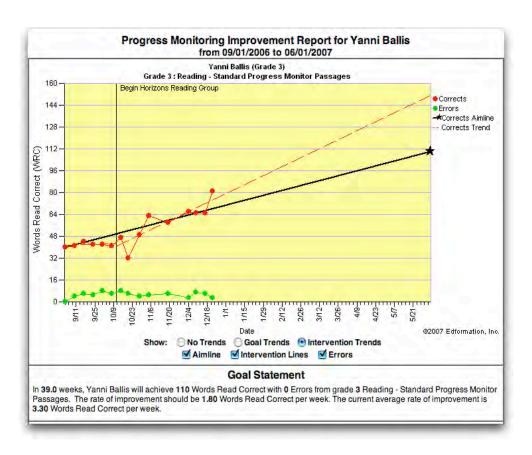
Again, It's Not "Anything Goes"
Special Education Has Legal and Regulatory Requirements

(3) Use *technically sound instruments* that may assess the relative contribution of cognitive and behavioral factors, in addition to physical or developmental factors.

(c) <u>*Other evaluation procedures*</u>. Each public agency must ensure that–

   (1) *Assessments and other evaluation materials* used to assess a child under this part–…

   (iii) Are *used for the purposes* for which the assessments or measures are *valid and reliable;*

Monitoring
A Specific Student's RTI

Samantha Spade (Grade 2)
Grade 2 : Reading - Standard Progress Monitor Passages

Expected ROI to Significantly Reduce the Gap

Actual ROI NOT Reducing the Gap

Words Read Correct (WRC)

- Corrects
- Errors
- Corrects Aimline
- - Corrects Trend

Date

Goal Setting for Special Education Entitlement

Progress Monitoring Improvement Report for Yanni Ballis
from 09/01/2006 to 06/01/2007

Yanni Ballis (Grade 3)
Grade 3 : Reading - Standard Progress Monitor Passages

Begin Horizons Reading Group

- Corrects
- Errors
- Corrects Aimline
- Corrects Trend

Words Read Correct (WRC)

Date

©2007 Edformation, Inc.

Show: ○ No Trends ○ Goal Trends ● Intervention Trends
☑ Aimline ☑ Intervention Lines ☑ Errors

Goal Statement

In **39.0** weeks, Yanni Ballis will achieve **110** Words Read Correct with **0** Errors from grade **3** Reading - Standard Progress Monitor Passages. The rate of improvement should be **1.80** Words Read Correct per week. The current average rate of improvement is **3.30** Words Read Correct per week.
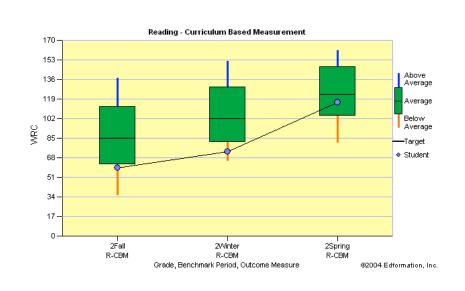
Fall Entry into Tier 3
PLOP of 40 WRC = 3rd Percentile

End-of-Year Goal of
110 WRC = 15th Percentile
Significant Reduction of Gap and
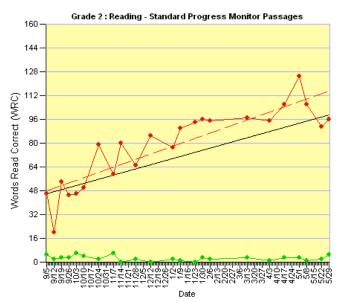Potential Tier 2 Services

RTI for Eligibility	Grade-Level Materials	After Sufficient Number of Weeks Showing Lack of Response to Appropriate Instruction	Significantly Reduce the Gap

Special Education Has Other Decisions Like Annual and 3 Year Evaluations

Reducing Educational Need (Gap)

Meeting or Exceeding IEP Goal

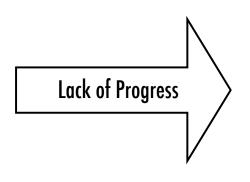# Model of Special Education Entitlement

Significant Performance Discrepancy

Lack of Progress →

Current Intervention Plan

Program Need

ROI That Reduces the Gap →

Special Education Program That May Reduce the Gap

All Start with Analyzing Extent Data

As part of an *initial evaluation* (if appropriate) and *as part of any reevaluation* under Part 300, the IEP Team and other qualified professionals, as appropriate, must:

Review existing evaluation data on the child, including:

Evaluations and information provided *by the parents* of the child;

Current classroom based, local, or State assessments, and *classroom-based observations*; and

Observations by teachers and related services providers; and

IDEA 2004

On the basis of that **review**, and input from the child's parents, **identify what additional data**, *if any,* are needed to determine:

Whether the child is a child with a disability, as defined in 34 CFR 300.8, and the educational needs of the child; or, in **case of a reevaluation of a child**, whether the **child continues to have such a disability**, and the **educational needs** of the child;

The present **levels of academic achievement** and related developmental needs of the child;

Whether the child needs special education and related services; or, in the **case of a reevaluation** of a child, whether the child **continues to need special education** and related services;

Annual and 3 Year Evaluation

Performance Discrepancy

← Goals That Reduces the Gap

Special Education Plan

Is the Student Still Significantly Discrepant?

← Is the Student Meeting or Exceeding the Expected Rate of Progress

Is the Plan Actually Delivered (Fidelity of Implementation)

If Yes, Consider Need   If Not, Revise IEP   If Not, Ensure IEP is Implemented
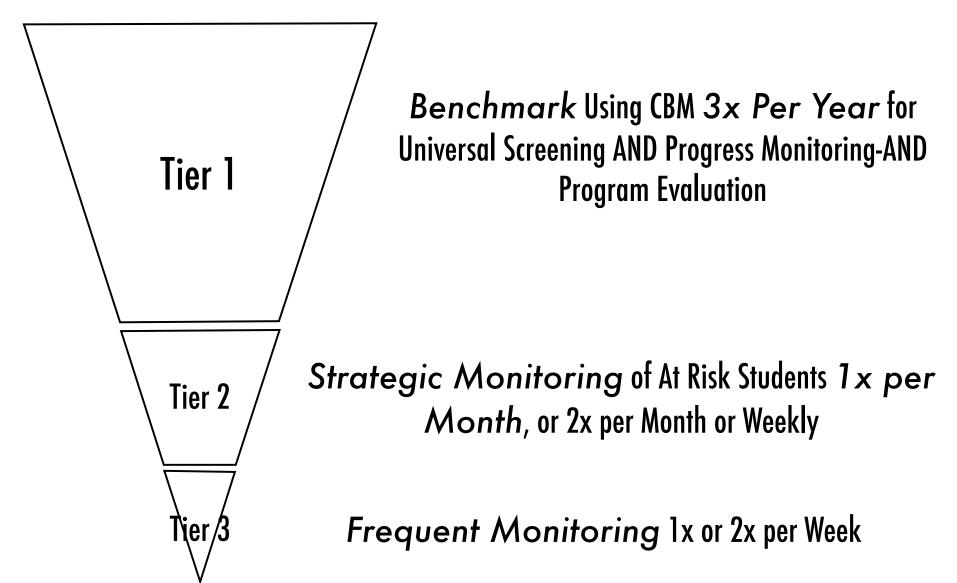
Now We're Ready for Other Tiers

Work Your Way Down…Remember, Students with Achievement Discrepancies Need PM More Than Typically Developing Students

Build a Common and Coordinated Data System with CBM Across 3 Tiers

Tier 1

Benchmark Using CBM *3x Per Year* for Universal Screening AND Progress Monitoring-AND Program Evaluation

Tier 2

Strategic Monitoring of At Risk Students *1x per Month*, or 2x per Month or Weekly

Tier 3

Frequent Monitoring 1x or 2x per Week

5 "Families" of Progress Monitoring and Goal Setting

Tier	Goal Material	Time Frame and Frequency	Criterion for Success
Special Education IEPs	**Individualized** Based on Severity	IEP Annual Goal "Anniversary Data" Weekly	Significantly Reduce the Gap
RTI for Eligibility	Grade-Level Materials	After Sufficient Number of Weeks Showing Lack of Response to Appropriate Instruction	Significantly Reduce the Gap
Tier 3: Frequent PM	Usually Grade Level	End of Year Weekly	Significanlty Reduce the Gap
Tier 2: Strategic	Grade-Level Materials	End of Year Month to Month	Adequate Progress and "Over the Bar"
Tier 1: Benchmark	Grade-Level Materials	End of Year Benchmark to Benchmark	Adequate Progress and "Over the Bar"

Goal Material

The Assessment Materials in Which We Expect to the Student to Show Progress

Grade-Level Material

- The material from the General Education Grade placement

- e.g., Grade 3 Student = Grade 3 Reading Passages

- e.g., Grade 7 Student = Grade 7 Reading Passages

Goal Material

- The material where we expect the student to be performing in successfully at the end of the time frame that reduces the gap

- e.g., Grade 4 Student with a Severe Discrepancy May = Grade 3

- e.g., Grade 6 Student with a Severe Discrepancy May = Grade 3

Time Frame

When We Expect the Student to Reach Their Goal

End-of-the-School Year

— When the School Year Ends

IEP "Anniversary Date"

— Around 1 Year from the Date the IEP is Written

Frequency

How Often to Monitor

Aligned with the Tier

— Tier 1 @ Benchmark (usually 3-4 times per year)

— Tier 2 tied to Resources (ranging from repeating the Benchmark in Off Months, to 2 times per month, to weekly)

— Tier 3 weekly

Aligned with the Decision

— RTI as part of SE Eligibility (1-2 times per week to generate a reliable rate of progress and judge response to appropriate instruction)

— IEP Progress monitoring toward Annual Goals (1-2 times per week to generate a reliable rate of progress and judge appropriate instruction)

Criterion for Judging Success
(Criterion for Acceptable Performance; CAP)

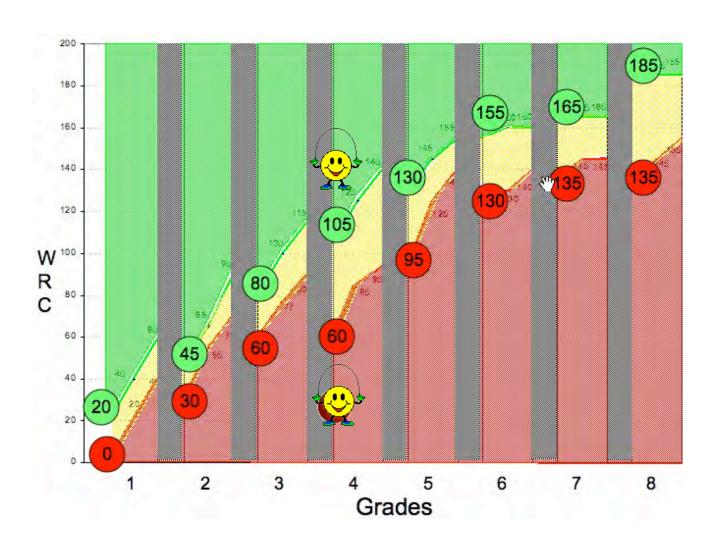## Two Approaches:

1. *Norm-Based*

Reading as Well as Other Specified Students

e.g., reading as well as students @ 25th percentile in School District A

e.g., reading reading as well as students @ 10th percentile nationally

2. *Standards-Based ("over the bar")*

Reading as Well to Increase Likelihood of Meeting Standards on a High Stakes Test
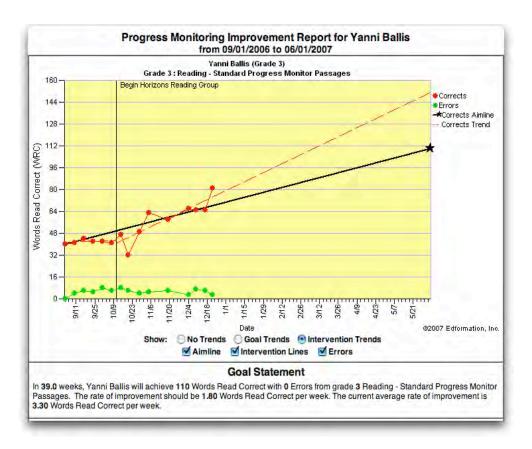
e.g., reading 80 WRC on Grade 3 probes because students with this score are highly likely to pass the Grade 3 SOL

e.g., reading 150 WRC on Grade 7 probes because students with this score are highly likely to pass the Grade 7 SOL

"Over the Bar" In Illinois

Images and Analyses Courtesy of Ben Ditkowsky, Ph.D.
ben@measuredeffects.com

Goal Setting for Tier 3 the Same As SE RTI

Progress Monitoring Improvement Report for Yanni Ballis
from 09/01/2006 to 06/01/2007

Yanni Ballis (Grade 3)
Grade 3 : Reading - Standard Progress Monitor Passages

Begin Horizons Reading Group

* Corrects
* Errors
* Corrects Aimline
- Corrects Trend

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Show: ○ No Trends ○ Goal Trends ● Intervention Trends
☑ Aimline ☑ Intervention Lines ☑ Errors

Goal Statement

In **39.0** weeks, Yanni Ballis will achieve **110** Words Read Correct with **0** Errors from grade **3** Reading - Standard Progress Monitor Passages. The rate of improvement should be **1.80** Words Read Correct per week. The current average rate of improvement is **3.30** Words Read Correct per week.

Fall Entry into Tier 3
PLOP of 40 WRC = 3rd Percentile

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110 WRC = 15th Percentile
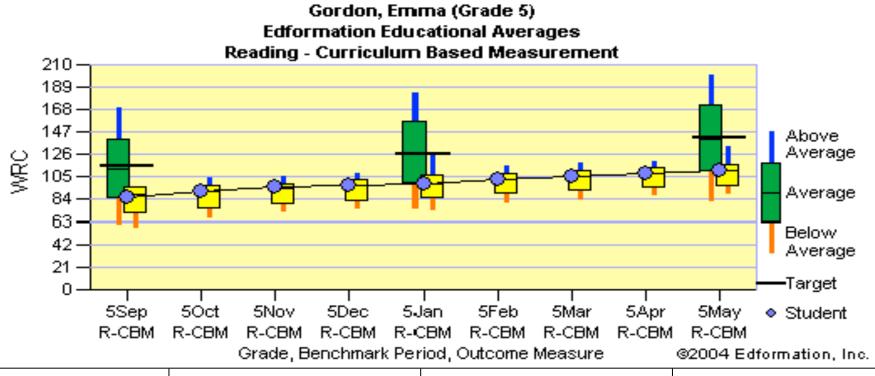Significant Reduction of Gap and
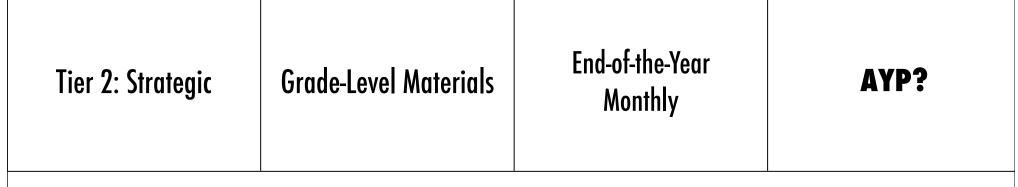Potential Tier 2 Services

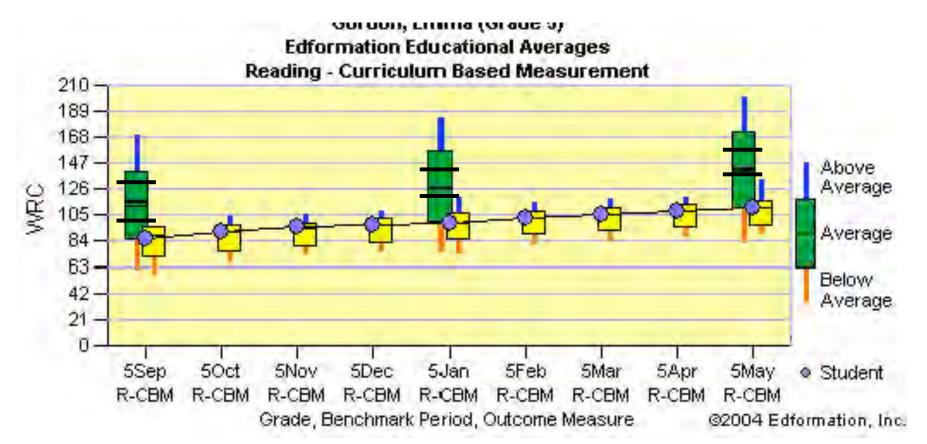| Tier 3: Frequent PM	Usually Grade Level	Weekly Monitoring Toward End of Year Goal	Significantly Reduce the Gap

Tier 2: Strategic Monitoring of At Risk

Gordon, Emma (Grade 5)
Edformation Educational Averages
Reading - Curriculum Based Measurement

WRC (y-axis): 210, 189, 168, 147, 126, 105, 84, 63, 42, 21, 0

X-axis:
5Sep R-CBM, 5Oct R-CBM, 5Nov R-CBM, 5Dec R-CBM, 5Jan R-CBM, 5Feb R-CBM, 5Mar R-CBM, 5Apr R-CBM, 5May R-CBM

Grade, Benchmark Period, Outcome Measure

Legend: Above Average, Average, Below Average, Target, Student

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This chart shows that Emma Gordon improved from 85 Words Read Correct (WRC) from grade 5 Passages at the September Benchmark to 90 Words Read Correct (WRC) at the October Benchmark and to 94 Words Read Correct (WRC) at the November Benchmark and to 96 Words Read Correct (WRC) at the December Benchmark and to 98 Words Read Correct (WRC) at the January Benchmark and to 101 Words Read Correct (WRC) at the February Benchmark and to 104 Words Read Correct (WRC) at the March Benchmark and to 107 Words Read Correct (WRC) at the April Benchmark. The rate of improvement (ROI) from the September Benchmark is 0.8 WRC per week. Currently, Emma Gordon's score is Average.

Tier 2: Strategic

Grade-Level Materials

Time Frame is End of Year

Frequency of Progress Monitoring Depends on Resources from 1 per Month (Repeated Benchmark Assessment) to Weekly

Adequate Progress and "Over the Bar"

Tier 2: Strategic	Grade-Level Materials	End-of-the-Year Monthly	**AYP?**

Gordon, Emma (Grade 5)
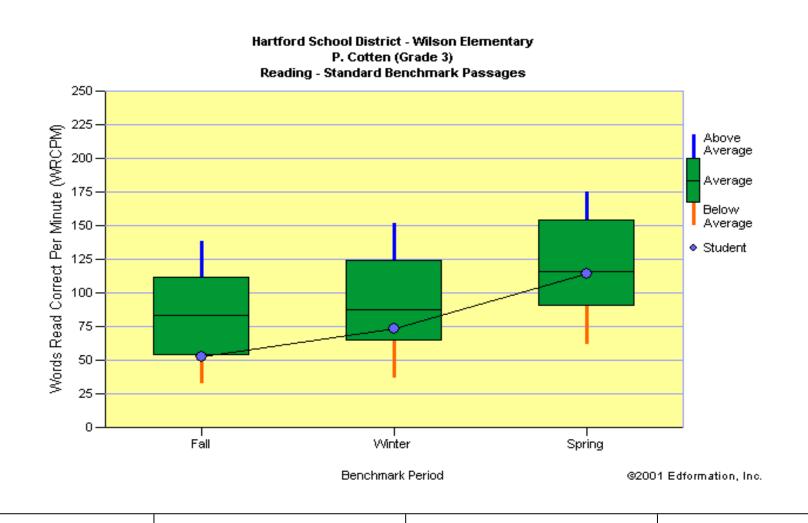Edformation Educational Averages
Reading - Curriculum Based Measurement

Emma, Grade 5, is NOT Making AYP

Tier 1 Progress Monitoring
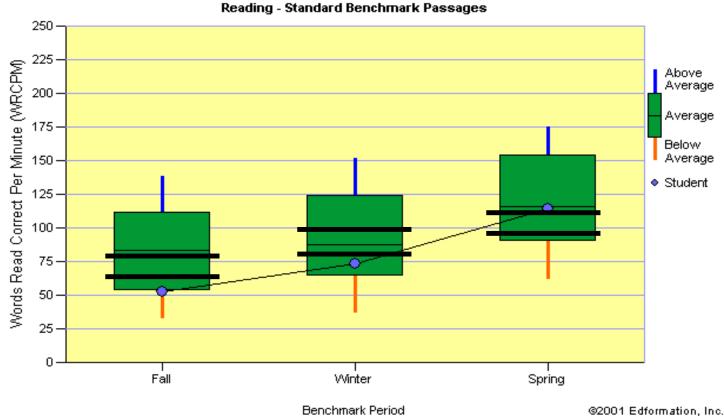## Combining Progress Monitoring with Screening in Benchmark

Hartford School District - Wilson Elementary
P. Cotten (Grade 3)
Reading - Standard Benchmark Passages

| Tier 1: Benchmark | Grade-Level Materials | End of Year Benchmark to Benchmark | Adequate Progress and "Over the Bar" |

Reduced the Gap and
Making AYP "Over the Bar"

Hartford School District - Wilson Elementary
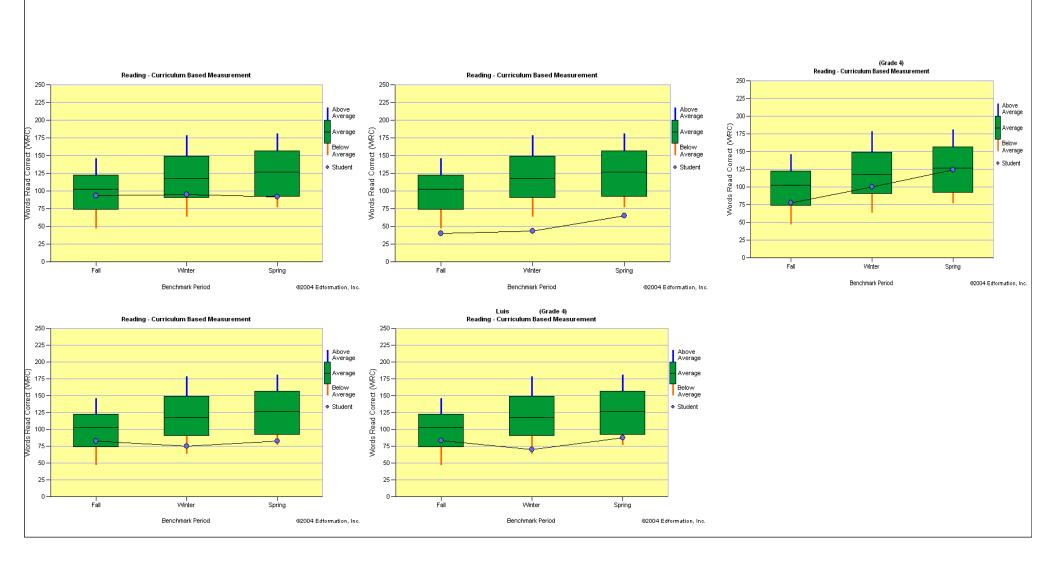P. Cotten (Grade 3)
Reading - Standard Benchmark Passages

PM Can Be "Disconnected" From Screening

Any Variety of Screeners May Work to Identify Students for Tiers 2 or 3, But Are They
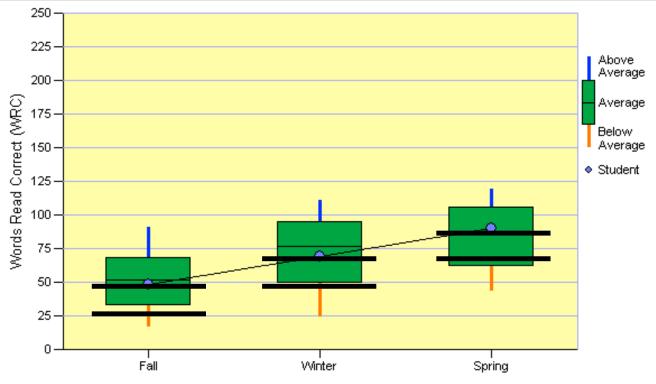
- COMPLETE?

- COORDINATED AND CONSISTENT?

- COMPLICATED?

- CONFIDENCE?

- FEASIBLE?

And When You Begin Good Frequent Progress Monitoring (and Use RtI) You'll Need to Transition to a Different Assessment Process...Oh Well.

Why Do I Prefer CBM at Tier 1?

Goal Material	Time Frame and Frequency	Criterion for Success
Grade-Level Materials	End-of-Year Benchmark to Benchmark, 3 Times per Year	Making AYP "Over the Bar"

Carlos, a Second Grader, Rate of Progress Also is Exceeding "Targets" That are Linked to His State Test. By the End of Grade 2, He has a 90% Chance of Passing The ISAT

Why is This a Good Thing?

All Teachers (and Families) Need Simple to Understand Information About Educational Need and Progress

These Data May Become the Basis for Part of the "Determinant Factors" for Special Education Eligibility

34 CFR 300.309 require the following:

(b) To ensure that underachievement in a child suspected of having a specific learning disability is not due to lack of appropriate instruction in reading or math, the group must consider—

(2) Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction, which was provided to the child's parents.

Consider Expanding in Other Content Areas

Again, Begin with IEP Goals and PM

CBM Provides Multiple Forms of Graded Basic Skills Assessment Materials

- Reading Curriculum-Based Measurement (R-CBM)

- Reading-Maze

- Spelling

- Written Expression

- Math Computation (M-COMP)

- Math Concepts and Application (M-CAP)

Early Literacy

- Letter Names
- Letter Sounds
- Phonemic Segmentation
- Nonsense Words

Early Numeracy

- Oral Counting
- Number Identification
- Missing Number
- Quantity Discrimination